

Engineering-Based Ship Repair, **Technical Services**



About Us

OUR MISSION

To deliver reliable and high-quality ship maintenance and repair services through an engineering-driven approach.

We aim not only to resolve technical issues in electrical, electronic, automation, and mechanical systems, but also to implement sustainable solutions that prevent recurring failures.

With our hands-on experience at sea, we are committed to providing fast, practical, and responsible service tailored to real operational needs.

OUR VISION

To become a globally recognized and trusted marine service provider, known for engineering excellence, reliability, and innovation.

We aim to set higher standards in ship maintenance and repair by combining field experience with advanced technical expertise.

Our vision is to deliver smart and sustainable solutions that improve vessel performance, safety, and operational continuity, while building long-term partnerships based on trust and consistent quality.

OUR
ENGINEERING
PHILOSOPHY

We believe in:
• Root-cause analysis • Long-term solutions • Integrated engineering
• Continuous improvement • Delivering measurable value

R&D &
INNOVATION

We develop systems that solve problems before they occur.
Focus areas:
• Generator protection systems • Oil-in-water detection systems
• Exhaust gas monitoring • Advanced safety automation

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Your Premier Maritime
Solutions Partner

- Ship Repairs
- Automation
- Technical Services
- Spare Parts
- Retrofit Solutions

Our Expertise

Electrical & Automation

At ACU Marine Service, our Electrical & Automation team ensures the reliable operation of ship systems through expert design, maintenance, and troubleshooting.



Generator & Machinery

ACU Marine Services provides expert maintenance and repair for ship generators and machinery, handling electrical faults, emergency generator testing, and main engine and auxiliary system upkeep to ensure reliable vessel performance and uptime.



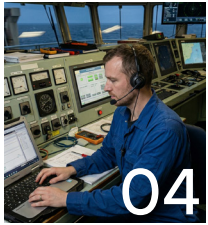
Boiler & Auxiliary Systems

ACU Marine Services provides expert maintenance and repair for boilers and auxiliary systems, handling automation, safety, and control faults with precision to ensure reliable and safe vessel operation.



Retrofits & Modernization

ACU Marine Services provides expert maintenance and repair for boilers and auxiliary systems, ensuring safe, reliable, and fully functional operation through precise automation and control fault management.



Technical Supply & Spare Parts

ACU Marine Services supplies high-quality marine electrical materials and equivalent parts, ensuring tested, reliable deliveries that keep your vessel's systems operational with minimal downtime.



01

Electrical,
Automation

PLC / HMI System	+
Power Management System (PMS)	+
Automation Faults & Software Updates	+
Alarm & Monitoring Systems	+
Boiler & Auxiliary Systems	+

➤ PLC / HMI System

Automation, Control & Visualization

We design, repair, and optimize automation systems that control critical vessel operations. With strong field experience, we provide solutions that are both **technically advanced** and **practically usable onboard**.



Our services include:

- PLC fault diagnosis and recovery
- Program backup, EPROM recovery & system replication
- Control logic optimization
- HMI design with user-friendly interfaces
- Communication troubleshooting (Modbus, Profibus, TCP/IP)
- Multi-system integration

Result

- Reliable automation
- Easy system control
- Faster troubleshooting



➤ PMS & AMS Systems

Power Management & Alarm Monitoring Engineering

Power and alarm systems are the backbone of vessel safety. We ensure these systems operate accurately, synchronously, and without failure. We provide complete engineering support from troubleshooting to full system integration.



Our expertise includes:

- Generator load sharing & synchronization
- Protection systems and blackout prevention
- Alarm monitoring systems and sensor integration
- PLC-based PMS & AMS optimization
- Retrofit and system modernization

What this means for you:

- Stable power generation
- Reduced blackout risk
- Fully reliable alarm systems



➤ Automation Faults & Software Updates

Troubleshooting, Optimization & System Reliability

We quickly identify automation faults, restore system functionality, and optimize software performance for uninterrupted vessel operations.



Our expertise includes:

- PLC fault diagnostics & system recovery
- Software troubleshooting and error correction
- Program backup, restoration & system replication
- EPROM recovery and legacy system support
- Control logic analysis and optimization
- Software updates and system upgrades
- Remote and onboard technical support

Result:

- Fast fault resolution
- Stable and optimized automation systems
- Reduced downtime and operational risk



Alarm & Monitoring Systems

Detection, Safety & System Reliability

Alarm and monitoring systems ensure vessel safety and operational awareness. We provide accurate detection, reliable alarm handling, and full system integration.



Our expertise includes:

- Alarm system fault diagnosis and troubleshooting
- Sensor integration and signal verification
- Alarm logic analysis and optimization
- False alarm reduction and system stabilization
- Real-time monitoring system setup
- Integration with PMS, AMS & PLC systems
- Calibration and functional testing

Result:

- Stable power generation
- Reduced blackout risk
- Fully reliable alarm systems



Boiler & Auxiliary Systems

Inspection, Control & Efficient Operation

We ensure safe and efficient boiler and auxiliary operations by combining mechanical expertise with advanced automation engineering. Our approach covers all critical systems onboard, guaranteeing reliable performance and operational safety.



Our expertise includes:

- Boiler fault diagnosis
- Burner tuning and combustion optimization
- Flame scanner testing and safety verification
- Fuel and ignition system troubleshooting
- Tank level measurement & cargo monitoring
- Hydraulic, pneumatic, and valve control systems
- Steering gear, heeling, and bow thruster systems

Result:

- Stable steam production
- Reduced fuel consumption
- Improved operational safety
- Accurate system monitoring & control



02

Generator,
Machinery

Generator Electrical Faults



Emergency Generator Testing & Repair



Main Engine and Auxiliary Systems



Generator Electrical Faults

Diagnosis, Repair & Reliable Power

ACU Marine ensures that all generator electrical systems onboard operate at peak performance. Our experienced team quickly detects faults, performs precise repairs, and implements preventive measures to minimize future failures. With extensive onboard knowledge, we handle complex electrical issues while maintaining operational continuity and safety.



- Our expertise includes:**
- Generator fault diagnostics and troubleshooting
 - Electrical repair and component replacement
 - Preventive maintenance and testing
 - Load sharing and synchronization checks
- Result:**
- Reliable and stable power generation
 - Reduced downtime and operational risk
 - Optimized generator performance for safe vessel operations

Emergency Generator Testing & Repair

Ready for Any Situation

Emergency generators are vital for vessel safety. ACU Marine performs thorough testing and repair services to guarantee that these systems function flawlessly during emergencies. We inspect electrical, mechanical, and safety components to ensure immediate readiness and compliance with international maritime standards.



Our expertise includes:

- Emergency generator testing and commissioning
- Fault diagnostics and repair
- Battery, fuel, and starter system checks
- Safety and protection system verification

Result:

- Immediate readiness in critical situations
- Reliable backup power for uninterrupted operations
- Reduced operational risk and improved vessel safety



Main Engine and Auxiliary Systems

Efficient & Safe Machinery Operation

ACU Marine provides comprehensive support for main engines and all auxiliary systems onboard. By combining mechanical expertise with advanced automation solutions, we optimize engine performance, improve fuel efficiency, and ensure smooth operation of pumps, valves, steering gears, and other critical machinery.



Our expertise includes:

- Main engine fault diagnostics and repair
- Fuel system, combustion, and turbocharger optimization
- Auxiliary system inspection and maintenance
- Hydraulic, pneumatic, pump, and valve checks
- Steering gear, bow thruster, and heeling system monitoring

Result:

- Efficient and reliable engine operation
- Enhanced operational safety and reduced risks
- Accurate monitoring and control for all onboard machinery

03

Boiler & Auxiliary Systems

Boiler Automation and Safety Systems	+
Combustion, Ignition, and Control Faults	+
Testing and Commissioning Services	+

➤ Boiler Automation and Safety Systems

Reliable Control & Safe Operation

ACU Marine provides advanced automation and safety solutions for marine boiler systems, ensuring reliable operation under all conditions. Our expertise covers control systems, safety interlocks, and full automation integration to maintain safe steam production and system stability. With strong onboard experience, we ensure that all boiler automation components function accurately and efficiently.



- Our expertise includes:**
- Boiler automation system design and troubleshooting
 - Safety interlock systems testing and verification
 - PLC-based boiler control optimization
 - Integration with vessel alarm and monitoring systems
 - Sensor calibration and signal verification
- Result:**
- Safe and stable boiler operation
 - Reliable automation and control systems
 - Reduced risk of system failure

➤ Combustion, Ignition, and Control Faults

Efficient Burning & Fault-Free Operation

ACU Marine specializes in diagnosing and resolving combustion, ignition, and control-related faults in boiler systems. We ensure optimal fuel-air mixture, proper ignition timing, and stable flame conditions to improve efficiency and reduce emissions. Our solutions focus on both performance and safety, minimizing operational risks.



Our expertise includes:

- Burner fault diagnosis and repair
- Combustion tuning and optimization
- Ignition system troubleshooting and adjustment
- Flame scanner testing and calibration
- Fuel system inspection and control adjustments

Result:

- Efficient and stable combustion process
- Reduced fuel consumption and emissions
- Improved operational safety and reliability



➤ Testing and Commissioning Services

Verified Performance & Operational Readiness

ACU Marine ensures that all boiler and auxiliary systems are fully tested and commissioned for safe and efficient operation. Our commissioning services include functional testing, system verification, and performance validation to guarantee that all components meet operational and safety standards before entering service.



Our expertise includes:

- Functional testing of boiler and auxiliary systems
- System commissioning and start-up support
- Safety and protection system verification
- Calibration and performance validation
- Onboard and remote technical support

Result:

- Fully operational and tested systems
- Compliance with safety and operational standards
- Reliable and efficient system performance from day one



04

Retrofits & Modernization

- Upgrade Legacy Systems to Modern PLC Solutions
- Panel Eenovation and Rewiring
- Energy Efficiency Improvements

➤ Upgrade Legacy Systems to Modern PLC Solutions

Smart Upgrades & Future-Ready Automation

ACU Marine specializes in upgrading outdated and legacy control systems to modern PLC-based automation platforms. We replace obsolete hardware and software with advanced, reliable, and scalable solutions, ensuring improved performance, easier maintenance, and long-term system sustainability. Our modernization approach minimizes downtime while maximizing operational efficiency.



- Our expertise includes:**
- Legacy system analysis and upgrade planning
 - PLC hardware and software replacement
 - Control logic redesign and optimization
 - Integration with existing onboard systems
 - Migration from obsolete platforms to modern solutions
- Result:**
- Future-ready automation systems
 - Improved reliability and performance
 - Reduced maintenance and spare part issues

➤ Panel Enovation and Rewiring

Safe, Clean & Reliable Electrical Systems

ACU Marine provides complete electrical panel renovation and rewiring services to improve system safety, reliability, and compliance with marine standards. We redesign panel layouts, replace aging components, and ensure proper cable management for long-lasting and trouble-free operation.



Our expertise includes:

- Electrical panel refurbishment and redesign
- Cable replacement and rewiring
- Terminal and connection improvements
- Component upgrade and replacement
- Compliance with marine electrical standards

Result:

- Safer and more reliable electrical systems
- Improved system organization and accessibility
- Reduced risk of electrical faults and failures



➤ Energy Efficiency Improvements

Optimized Performance & Reduced Consumption

ACU Marine delivers energy efficiency solutions to reduce fuel consumption and optimize vessel performance. By analyzing system loads, automation logic, and operational patterns, we implement smart improvements that enhance efficiency without compromising reliability or safety.



Our expertise includes:

- Energy consumption analysis and reporting
- Optimization of automation and control systems
- Load management and system balancing
- Upgrade to energy-efficient components
- Performance monitoring and continuous improvement

Result:

- Reduced fuel and energy consumption
- Lower operational costs
- Environmentally friendly and efficient operations



05

Technical Supply & Spare Parts

- Marine-Grade Electrical Materials
- Equivalent and Fast Supply Solutions
- Tested and Commissioned Deliveries

➤ Marine-Grade Electrical Materials

High-Quality & Durable Components

ACU Marine delivers energy efficiency solutions to reduce fuel consumption and optimize vessel performance. By analyzing system loads, automation logic, and operational patterns, we implement smart improvements that enhance efficiency without compromising reliability or safety.



- Our expertise includes:**
- Supply of marine-certified electrical components
 - Cables, sensors, switches, and control equipment
 - Automation and control system spare parts
 - Selection based on class and project requirements
 - Quality assurance and compatibility checks

- Result:**
- Long-lasting and reliable components
 - Compliance with marine standards
 - Reduced risk of equipment failure

➤ Equivalent and Fast Supply Solutions

Flexible Sourcing & Rapid Delivery

ACU Marine provides fast and flexible spare part supply solutions, including equivalent alternatives for obsolete or hard-to-find components. Our global sourcing capability ensures that critical parts are delivered quickly, minimizing vessel downtime and operational delays.



Our expertise includes:

- Supply of original and equivalent spare parts
- Obsolete component replacement solutions
- Fast global sourcing and logistics coordination
- Cost-effective and reliable alternatives
- Technical support for part selection and compatibility

Result:

- Fast and reliable spare part supply
- Reduced downtime and waiting time
- Cost-effective and sustainable solutions



➤ Tested and Commissioned Deliveries

Ready-to-Use & Verified Systems

ACU Marine ensures that all supplied equipment and systems are fully tested and commissioned before delivery. Our pre-delivery testing guarantees that all components meet operational, safety, and performance requirements, allowing immediate use onboard without additional adjustments.



Our expertise includes:

- Pre-delivery functional testing
- System configuration and setup
- Calibration and verification processes
- Factory acceptance and onboard support
- Ready-to-install and ready-to-operate deliveries

Result:

- Plug-and-play ready systems
- Reduced installation and commissioning time
- Guaranteed performance and reliability from day one

Worldwide Ports, Seamless Support



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